

Despite support from UK and European legislation **Paul Huggins** believes there is still a long road ahead for the development of energy-saving products

Over the past decade energy efficient product markets have seen phenomenal levels of growth in the UK.

Sales have been booming for new products that can offer organisations greater efficiencies, significant cost savings and reduced carbon emissions. The UK market for energy efficient industrial products is currently worth approximately £15-20bn a year.

Between 2003 and 2012 the market for some types of heat pumps grew five times, and the variable speed drive market increased seven times. Between 2005 and 2012 the market for biomass boilers grew a massive 64 times. Strong double-digit growth was observed across the board in most technology controls markets. New markets have also emerged such as LED lighting, which effectively did not exist in 2008, but by 2012 represented 13% of all energy efficient lighting product sales.

But these stellar successes did not happen by themselves - government intervention has been in part responsible. Over the last decade much change has occurred to deliver much-needed economic and sustainability improvements across a wide spectrum of industrial technology markets. Industry wide voluntary agreements, government interventions, and much improved product information have delivered real and positive change.

In a perfect world

In a perfect world with perfect information then perfect decisions would be made. In this perfect world then market competition would drive forward product innovation, which in turn would lead to all products being highly efficient.

Reality is of course very different - markets are imperfect and governments take action to steer them in order to meet economic objectives. Even where technology manufacturers are investing in product innovations that deliver sustainability benefits, many of these benefits are difficult to communicate to customers.

Through a combination of

Huggins: 'we are still quite close to the beginning of the technology innovation journey to sustainable products'



incentives, providing advice or information, regulations and addressing barriers to positive change then it is possible to develop effective markets that consume resources efficiently and minimise social or environmental harm.

Shaping product markets is absolutely fundamental in addressing climate change and resource crunches. For example recent government analysis shows that policies promoting more efficient new products will have the greatest impact on driving down household energy bills, with an expected average reduction of £158 by 2020 compared to 2012. To put this into perspective this is almost twice the anticipated impact of smart metres and better billing, and over four times the expected impact of the Green Deal and the Energy Company Obligation.

A decade ago customers wishing to purchase industrial technology didn't have ready access to the information necessary to make rational purchase choices. This was bad news for the customer, the UK economy and the environment. With limited information the customer was likely to make an irrational purchase - perhaps buying a product with a low purchase price but, in the longer-term, a high running cost.

TALKING HEADS

Paul Huggins

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If all customers made choices in this way the economy would suffer because resources would not be consumed efficiently - too much energy would be consumed to deliver the required level of production. In turn this contributes to increased environmental impact, such as additional carbon emissions or too much water being consumed.

Providing better information is just

one of the many interventions that governments can make to help shape product markets. Of course just one new policy alone won't address all the issues - for example even products that are labelled as being extremely efficient in their operation could have far greater impacts across their full life cycle - taking into account everything from raw material to disposal. But over the last few years a number of measures have converged, helping to magnify their impact and influence across some technology markets, increasing sales for efficient products and helping to remove inferior ones from sale. Some of the most important of these include:

- the Labelling Directive ensures better information on the performance of the products is provided to customers, so they can make better decisions.
- the Enhanced Capital Allowance (ECA) scheme for energy saving technologies encourages, through a tax break, the purchase of products with top quartile energy saving performance.
- tougher building regulations, which lead us to towards more demanding requirements that will deliver near-zero carbon building by 2016.

There are other effects: for example, manufacturers and the wider supply chain for their technologies, such as designers and installers, continue to have certainty that they can invest in development. This should drive a continued improvement in the energy efficiency of technology and use of those technologies, with benefits across the UK economy.

However, we are still quite close to the beginning of the technology innovation journey to sustainable products. The pace of innovation shows no signs of slowing. Encouraging this and supporting industries that help drive efficiency will be a very important part of helping to secure a sustainable, low carbon future.

• *Paul Huggins is associate director of The Carbon Trust*